

What is claimed is:

1. A fuel cell comprising:

an electrolyte electrode assembly including a pair of electrodes and an electrolyte interposed between said electrodes;

separators for sandwiching said electrolyte electrode assembly,

wherein a reactant gas supply passage, a reactant gas discharge passage, a coolant supply passage, and a coolant discharge passage extend through said fuel cell in a stacking direction of said fuel cell;

a coolant flow field connected between said coolant supply passage and said coolant discharge passage is formed along a surface of said separator;

said coolant supply passage is provided at a vertically middle position of one horizontal end of said separator, and said coolant discharge passage is provided at a vertically middle position of the other horizontal end of said separator; and

an air-releasing passage for releasing air from said coolant flow field is formed at an upper position of the other horizontal end of said separator such that at least part of said air-releasing passage is positioned above a top of said coolant flow field.

2. A fuel cell according to claim 1, wherein at least

the top of said coolant flow field is inclined upwardly toward said air-releasing passage.

5           3. A fuel cell according to claim 1, wherein said air-releasing passage is positioned above said coolant discharge passage.

10           4. A fuel cell according to claim 1, wherein said separator includes first and second metal plates which are stacked together, and said coolant flow field is formed between said first and second metal plates.

15           5. A fuel cell according to claim 4, wherein said first metal plate has an oxygen-containing gas flow field in a serpentine pattern on a surface opposite to said coolant flow field, and said second metal plate has a fuel gas flow field in a serpentine pattern on a surface opposite to said coolant flow field.

20           6. A fuel cell according to claim 1, wherein said reactant gas supply passage comprises an oxygen-containing gas supply passage and a fuel gas supply passage, and said reactant gas discharge passage comprises an oxygen-containing gas discharge passage and a fuel gas discharge passage; and

25           said oxygen-containing gas supply passage and said fuel gas supply passage are provided at lower positions of

opposite horizontal ends of said separator, and said oxygen-containing gas discharge passage and said fuel gas discharge passage are provided at upper positions of opposite horizontal ends of said separator.